

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.-10. (Canceled).

11. (Previously Presented) An image reading method, comprising:
preparing a four-line CCD sensor comprising a BK line sensor and R, G and B line sensors;
applying a light to a white reference plate from a light source when reading a first sheet of documents in a monochromatic reading mode reading monochromatic images from plural numbers of documents successively and receiving reflecting light from the white reference plate by the BK line sensor to output a digital monochromatic signal;
storing the digital monochromatic signal outputted from the BK line sensor as a first white reference data for a monochromatic signal;
turning off the light to output a digital monochromatic signal from the BK line sensor;
storing the digital monochromatic signal outputted from the BK line sensor when the light is turned off, as a black reference data for a monochromatic signal;
executing a shading correction of the monochromatic signal that is a first reflecting light received by the BK line sensor from the first sheet of the documents and output by the BK line sensor based on the first white reference data for a monochromatic signal and the black reference data for a monochromatic signal;
applying the light to the white reference plate from the light source when reading a second sheet of the documents in the monochromatic reading mode and receiving the reflecting light from the white reference plate by the BK line sensor to output a digital monochromatic signal;
storing the digital monochromatic signal outputted from the BK line sensor as a second white reference data for a monochromatic signal;
executing a shading correction of the monochromatic signal that is a second reflecting light received by the BK line sensor from the second sheet of the documents and output by the BK line sensor based on the second white reference data for a monochromatic signal only;

applying a light to the white reference plate from the light source when reading a first sheet of documents in a color reading mode reading color images from plural numbers of documents successively and receiving the reflecting light from the white reference plate by the R, G and B line sensors to output digital color signals;

storing the digital color signals outputted from the R, G and B line sensors as a first white reference data for color signals;

turning off the light to output digital color signals from the R, G and B line sensors;

storing the digital color signals outputted from the R, G and B line sensors when the light is turned off, as black reference data for color signals;

executing a shading correction of the color signal that is a first reflecting light received by the R, G and B line sensors from the first sheet of the documents and output by the R, G and B line sensors based on the first white reference data for color signal and the black reference data for color signal;

applying the light to the white reference plate from the light source when reading a second sheet of the documents in the color reading mode and receiving the reflecting light from the white reference plate by the R, G and B line sensors to output digital color signals;

storing the digital color signals outputted from the R, G and B line sensors as a second white reference data for color signals; and

executing a shading correction of the color signal that is the second reflecting light received by the R, G and B line sensors from the second sheet of the documents and output by the R, G and B line sensors based on the second white reference data for color signal only.

12. (Previously Presented) An image reading method, comprising:

preparing a four-line CCD sensor comprising a BK line sensor and R, G and B line sensors;

applying a light to a white reference plate from a light source and receiving reflecting light from the white reference plate by the BK line sensor and R, G and B line sensors to output a digital monochromatic signal and digital color signals;

storing the digital monochromatic signal and the digital color signals as white reference data;

turning off the light to output a digital monochromatic signal from the BK line sensor and color signals from the R, G and B line sensors;

storing the digital monochromatic signal outputted from the BK line sensor and the color signals from the R, G and B line sensors when the light is turned off, as black reference data;

judging whether plural number of documents are monochromatic documents or color documents by sequentially scanning the documents;

executing a shading correction of the monochromatic image signal that is the reflecting light from the document received and output by the BK line sensor based on the white reference data and the black reference data when a first sheet of the document is judged to be a monochromatic document; and

executing a shading correction of the color signal that is the reflecting light received and output by the R, G and B line sensors based on the white reference data only when the first sheet of the document is judged to be a color document.

13. (Previously Presented) The method according to Claim 12 further comprising:

executing a shading correction of the monochromatic signal that is the reflecting light from the document received by and output from the BK line sensor based on the white reference data and the black reference data when a second sheet of the document is judged to be a monochromatic document; and

executing a shading correction of the color signals that are the reflecting light from the document received and output from the R, G and B line sensors when the second sheet of the document is judged to be a color document, based on the white reference data only.

14. (Previously Presented) An image reading method, comprising:

preparing a four-line CCD sensor comprising a BK line sensor and R, G and B line sensors; and

storing a digital monochromatic signal and digital color signals that are output from the BK line sensor and the R, G and B line sensors as a black reference data with a light source turned off when a first copy is preferential among the first copy being preferential and a ready time being preferential, at the time when power is turned ON.

15. (Previously Presented) The method according to Claim 14 further comprising:

storing a digital monochromatic signal and digital color signals that are reflecting light of the light applied to a white reference plate from the light source and then received and output by the BK line sensor and the R, G and B line sensors as a white reference data when the first copy is preferential at the time when power is turned ON.

16. (Previously Presented) An image reading method comprising the steps: preparing a four-line CCD sensor comprising a BK line sensor and R, G and B line sensors;

storing digital color signals that are reflected light of light applied from a light source to a white reference plate and received and output by the R, G and B line sensors as white reference data for color signals;

storing a digital monochromatic signal that is reflected light of the light applied from the light source to the white reference plate and received and output by the BK line sensor as white reference data for a monochromatic signal;

storing the digital color signals that are output from the R, G and B line sensors as black reference data for color signals with the light source is turned off;

storing the digital monochromatic signal that is output from the BK line sensor as black reference data for a monochromatic signal with the light source is turned off;

judging whether plural number of documents are monochromatic documents or color documents by sequentially scanning the documents;

executing a shading correction of color signals output from the R, G and B line sensors by receiving the reflecting light from the document by the R, G and B line sensors based on the white reference data for color signals and the black reference data for color signals when a first sheet of the document is judged to be a color document; and

executing a shading correction of a monochromatic signal output from the BK line sensor by receiving the light from the document by the BK line sensor based on the monochromatic white reference data for a monochromatic signal and the black reference data for a monochromatic signal when the first sheet of the document is judged to be a monochromatic document.

17. (Canceled).

18. (New) The method according to Claim 11, wherein the BK line sensor has first and second shift gates and first and second analog shift registers in which charges corresponding to odd pixels are supplied to the first analog shift register via the first shift gate and charges corresponding to even pixels are supplied to the second shift register via the second shift gate.

19. (New) The method according to Claim 12, wherein the BK line sensor has first and second shift gates and first and second analog shift registers in which charges corresponding to odd pixels are supplied to the first analog shift register via the first shift gate and charges corresponding to even pixels are supplied to the second shift register via the second shift gate.

20. (New) The method according to Claim 14, wherein the BK line sensor has first and second shift gates and first and second analog shift registers in which charges corresponding to odd pixels are supplied to the first analog shift register via the first shift gate and charges corresponding to even pixels are supplied to the second shift register via the second shift gate.

21. (New) The method according to Claim 16, wherein the BK line sensor has first and second shift gates and first and second analog shift registers in which charges corresponding to odd pixels are supplied to the first analog shift register via the first shift gate and charges corresponding to even pixels are supplied to the second shift register via the second shift gate.